

REMARKS / ARGUMENTS

Claims 20, 44-47, 49-53, 55-60, and 62-68 are currently pending in the application. Claims 20, 44-47, 49-53, 55-60, and 62-65 stand rejected. Applicant has amended herein claims 20, 51, and 65, and added new claims 66-68. Support for these amendments can be found in the specification as originally filed. No new matter is added by the amendments. In view of the following discussion, the Applicant submits that all pending claims are in condition for allowance.

Claim Rejections under 35 U.S.C. §101:

At page 3 of the Office Action, the Examiner has rejected claim 65 under 35 U.S.C. §101 for allegedly improperly reciting a process claim. Amended claim 65 recites “wherein the wind turbine further comprises an electrical energy production component, and wherein the electrical energy is operable to power an automatic fish feeding-related service of the foundation”. Claim 65 depends from an apparatus claim, i.e., claim 20, and Applicant has amended claim 65 to recite additional structure of the foundation body. Applicant submits that amended claim 65 properly claims an apparatus claim. As such, Applicant respectfully requests the rejection be withdrawn.

Claim Rejections under 35 U.S.C. §112, first paragraph:

At page 4 of the Office Action, the Examiner has rejected claims 20, 44-47, 49-53, 55-60, and 62-65 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Specifically, the Examiner alleges that the principle of blocked vertical thrust is non-enabled, alleging that if the WO 01/73292 reference (“the ‘292 reference”), which states that waves can wash over the raft, is not operating on the principle of blocked thrust as contended by the Applicant, then Applicant has not offered an enabling disclosure for blocked vertical thrust. The Examiner essentially alleges that based on the disclosure of the ‘292 reference, one having ordinary skill in the art cannot make the invention claimed in the instant application. Applicant respectfully disagrees with the Examiner.

The position of the Examiner is based on a faulty premise, i.e., that the ‘292 reference discloses what is claimed by the Applicant. According to MPEP §2164.01, “[a]ny analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding

the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention.” (emphasis added) The test for enablement includes an analysis of the instant application, not the cited prior art. Nevertheless, considering for a moment the disclosure of the ‘292 reference, the ‘292 reference is silent on the principle of blocked vertical thrust and is silent on immersing a foundation body under a wave motion area and biasing the foundation against thrusting vertically into the wave motion area. The raft 4 of the ‘292 reference floats, and is intended to float at or just under the surface of the water (p. 4, lines 1-3 of the ‘292 reference). From page 10, line 31 through page 11, line 1, the ‘292 reference states, “the location of the raft in the water, incl. depth and heeling in the long and transverse direction, will be affected by the wind speed, the waves, axial forces, gyro forces, etc.” The raft of the ‘292 reference lies within a wave motion area, and moves up and down with the waves and tide (see FIG. 5 of the ‘292 reference). In contrast, amended claims 20 and 51 require that when a buoyant foundation body, is operable to be, or is, submerged below a wave motion area, the vertical thrust of the foundation body is operable to be, or is, blocked or biased to prevent the foundation body from vertically thrusting into a wave motion area. Thus, the ‘292 reference does not enable one skilled in the art to practice the presently claimed invention.

The specification of the instant application provides a clear description of the present invention such that a person having ordinary skill in the art can make and/or use the invention as claimed without undue experimentation. *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988); *see also United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). The specification recites at least one embodiment employing the principle of blocked vertical thrust where a foundation body is immersed below a wave motion area and the foundation is biased against thrusting vertically into the wave motion area. For example, from page 3, lines 8-18 of the instant application, the specification states that at least one embodiment of the present invention includes a buoyant foundation that “can be filled with air or different gas, and stabilized with ballast...to be anchored to the sea bed using tension chains or cables that also connect it to submerged counterweights and that make it permanently fixed and able to resist weight, pressure, and stress, even when combined together, of an intensity equal to the vertical thrust of the floating foundation.” From page 5, lines 28-30 of the instant application, the specification states that at least one embodiment includes “connecting tension chains or cables between the foundation and the counterweights [and] positioned in vertical as well as

diagonal directions in order to block and movement of the system.” As such, Applicant submits that claims 20, 44-47, 49-53, 55-60, and 62-65 comply with the enablement requirement, and respectfully requests that the Examiner’s §112, first paragraph, rejection be withdrawn.

Claim Rejections under 35 U.S.C. §112, second paragraph:

At page 5 of the Office Action, the Examiner has rejected claim 65 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Specifically, the Examiner alleges that it is unclear what method/process Applicant is intended to encompass. As aforementioned, Applicant submits that amended claim 65 properly claims an apparatus claim, and that amended claim 65 is definite. Accordingly, Applicant respectfully requests that the Examiner’s §112, second paragraph, rejection be withdrawn.

Claim Rejections under 35 U.S.C. §102(b):

In the Office Action on page 5, the Examiner rejected claims 20, 44-47, 51, 53, 55, 59, and 65 under 35 U.S.C. §102(b) as being anticipated by the ‘292 reference. Applicant respectfully traverses this rejection.

At page 2 of the Office Action, the Examiner alleges that independent claim 20 is replete with functional language that fails to limit the claim language. Applicant submits that the Examiner improperly failed to consider the functional limitations in claim 20 as positive limitations regarding patentability. According to MPEP §2173.05(g), “a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.” Indeed, “[t]here is nothing inherently wrong with defining some part of an invention in functional terms.” *In re Swinhart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971). As such, functional language must be evaluated and considered as a positive, patentable limitation. Here, claim 20 has been amended to recite further structure and to clarify the functional language as important to the overall claimed invention.

Amended claim 20 recites a foundation body having a lower submergible buoyant part operable to be submerged below a wave motion area of a body of water, the foundation body comprising an upper part comprising a wind turbine extending therefrom and operable to extend above a surface of the water, and further comprising a first tension cable tethered to the upper

part and tethered to the foundation body, and at least one counterweight, tethered to the foundation body, operable to bias the foundation body against thrusting vertically into the wave motion area and operable to be disposed on a surface of a floor of a body of water, wherein the upper part further comprises a chamber for an electrical installation to control the wind turbine, and at least one storage chamber.

It is useful to consider the principle of biasing or blocking vertical thrust as described in the present application. By placing the lower buoyant part of the submergible foundation of the present invention well below the wave motion area and preventing the foundation from thrusting into the wave motion area, the lower buoyant part of the submergible foundation avoids the tilting caused by wave motion. Buoyancy is the tendency to float, and the submerged buoyant part of the foundation therefore tends to thrust vertically and rise to the surface. However, the counterweights create an opposite force biasing the foundation body in place below the wave surface and below the wave motion area. As such, the vertical thrust of the submerged buoyant foundation is blocked. By way of example, from FIG. 1 and related text in the specification of the instant application, at least one embodiment of the present invention includes counterweights 2 tethered to a lower part 4 of buoyant foundation 6 with chains or cables 3. The counterweights 2 bias the buoyant foundation 6 against thrusting vertically into the wave motion area 8.

Applicant submits that the '292 reference is silent as to biasing against thrusting vertically into the wave motion area as required in amended claim 20. The '292 reference does not disclose or suggest a foundation body submerged below a wave motion area. In fact, the '292 reference teaches the opposite. The '292 reference teaches a floating raft 4 that is intended to be affected by the wind speed, the waves, axial forces, gyro forces, etc. (page 10, line 31 through page 11, line 1, the '292). From page 14, lines 4-9, the '292 reference teaches changing the amount of liquid in a given tank 18 of a pontoon 4a, 4b to "compensate for movements initialized by waves." Moreover, FIGS. 1 and 3 and the related text of the '292 reference disclose an anchor rope or chain 8 that is attached to the raft 4 while the raft is being affected by the waves in the wave motion area. As such, the '292 reference makes clear that raft 4 is intended to be always located in the wave motion area, and not below the wave motion area as in amended claim 20. The '292 reference fails to disclose or suggest each and every limitation of amended claim 20. Applicant submits that amended claim 20 is patentable. As claims 42-47,

59, and 65, and new claim 66, depend from amended claim 20, and recite additional patentable features, claims 42-47, 59, 65, and 66 are, therefore, likewise patentable.

Amended claim 51 recites [a] method of implementing a buoyant foundation operable to support a load comprising: immersing a buoyant foundation body below a wave motion area of water; disposing a turbine tower having a wind turbine on an upper part of the foundation body; and attaching a counterweight to the foundation body using a tension cable, operable to bias the foundation body against thrusting vertically into the wave motion area.

At page 3 of the Office Action, the Examiner alleges that independent claim 51 includes functional language that fails to limit the claim language. At page 6 of the Office Action, the Examiner alleges that the '292 reference discloses a foundation body 4 that is adapted to be submerged below a wave motion area (see page 4, lines 1-3 of the '292 reference). Applicant respectfully disagrees with the Examiner.

In view of the amendment to claim 51 and the foregoing remarks, incorporated by reference herein, the '292 reference does not disclose or suggest a method including the steps of "immersing a buoyant foundation body below a wave motion area of water... and attaching a counterweight to the foundation body using a tension cable, operable to bias the foundation body against thrusting vertically into the wave motion area." Thus, the '292 reference does not disclose each and every limitation of amended claim 51. In view of the above, Applicant respectfully submits that amended claim 51 is patentable over the '292 reference. As claims 53 and 55, and new claims 67 and 68, depend from amended independent claim 51, and recite additional patentable features, claims 51, 53, 55, 67, and 68 are likewise patentable.

In view of the above, Applicant respectfully requests that the Examiner's §102(b) rejections be withdrawn.

Claim Rejections under 35 U.S.C. §103(a):

At page 2 of the Office Action, the Examiner alleges that "based on Applicant's disclosure, the '292 reference is quite capable of being submersed to such a depth to block vertical thrust." As fully described above, this is incorrect, and the Examiner's citation to the specification of the instant application for the motivation to use the principle of blocked vertical

thrust is impermissible hindsight. *See W.L. Gore and Assoc. v. Garlock Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983).

With regard to the following §103 rejections, Applicant submits that nothing in the ‘292 suggests an apparatus capable of employing methods or principles to prevent a foundation body from thrusting vertically into a wave motion area. The Examiner does not present evidence supporting the allegation that the ‘292 reference discloses or suggests immersing the foundation body below a wave motion area and biasing the foundation body against thrusting vertically into the wave motion area as claimed. The ‘292 reference specifically teaches the apparatus is not below a wave motion area. As aforementioned, the ‘292 reference specifically teaches to maintain the raft in a wave motion area and the raft will be affected by waves at its location because it floats (page 4, lines 1-3) either on the water surface or right below the water surface. When reviewing prior art, the Examiner must take “into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure.” *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

At page 7, paragraph 1, and page 10, paragraph 2, of the Office Action, the Examiner has rejected claims 49 and 62-63, respectively, under 35 U.S.C. §103(a) as being unpatentable over the ‘292 reference in view of Japanese Patent Application Laid-open No. 2002-285951 (“‘951 reference”). Applicant respectfully traverses this rejection.

Amended claim 20 is recited above. Claims 49 and 62-63 depend therefrom. The patentability of amended independent claim 20 over the ‘292 reference is discussed above. The ‘951 reference does not disclose or suggest immersing the foundation body below a wave motion area and preventing the foundation from thrusting into the wave motion area. The ‘951 reference only discloses a floating body-type structure that is *partially* submerged below sea level and thus within the wave motion area, and not below a wave motion area. Thus, the ‘951 reference does not cure the aforementioned deficiencies of the ‘292 reference with respect to amended claim 20. The teachings of the ‘292 reference and the ‘951 reference, alone or in combination, do not result in the present invention as claimed. As such, Applicant submits that claims 49 and 62-63, which depend from amended claim 20, are patentable, and respectfully requests that the §103 rejection be withdrawn.

In the Office Action on page 7, paragraph 5, the Examiner rejected claim 50 under 35 U.S.C. §103(a) as being unpatentable over the ‘292 reference in view of the ‘951 reference, and in further view of U.S. Pat. No. 5,617,813 (“the ‘813 patent”). Applicant respectfully traverses this rejection. The patentability of amended claim 20 with respect to the ‘292 reference and the ‘951 reference is discussed above. Claim 50 depends from amended claim 20 and includes further patentable features. Therefore the ‘813 patent cannot cure the aforementioned deficiencies of the ‘292 reference and the ‘951 reference. As such, Applicant submits that claim 50 is patentable, and respectfully requests that the §103 rejection be withdrawn.

In the Office Action on page 8, the Examiner rejected claim 52 under 35 U.S.C. §103(a) as being unpatentable over the ‘292 reference in further view of Great Britain Patent 849,887 (“the ‘887 patent”). Applicant respectfully traverses this rejection. Claim 52 depends from amended claim 51 and includes further patentable features. The patentability of independent claim 51 over the ‘292 reference is discussed above. The ‘887 patent relates to a floating drilling structure that permits controlled oscillation when the structure is exposed to forces of wind and water and is anchored in place to prevent waves from carrying the floating drilling structure far off the drilling site. The ‘887 patent does not disclose or suggest immersing the structure below a wave motion area and biasing the structure against thrusting vertically into the wave motion area. Thus, the ‘887 patent does not cure the aforementioned deficiencies of the ‘292 reference with respect to amended claim 51. The teachings of the ‘292 reference and the ‘887 patent, alone or in combination, do not result in the present invention as claimed. As such, Applicant submits that claim 52 is patentable, and respectfully requests that the §103 rejection be withdrawn.

In the Office Action on page 9, paragraph 1, the Examiner rejected claim 56 under 35 U.S.C. §103(a) as being unpatentable over the ‘292 reference in further view of the ‘951 reference. Applicant respectfully traverses this rejection. Claim 56 depends from amended claim 51 and recites attaching a fish farming installation to the foundation body, which is immersed below a wave motion area and biased against thrusting vertically into the wave motion area. The patentability of amended claim 51 over the ‘292 reference is discussed above. The ‘951 reference only discloses “fish banks effects of fishes” (abstract) in a lower part of a floating central body-type structure 3 that is *partially* submerged below sea level and works in

compliance with varying buoyancy with waves. Thus, the floating central body-type structure 3 resides within the wave motion area, and not below the wave motion area. The combination of references does not result in the present invention of claim 56. As the '951 reference does not cure the deficiencies with respect to the '292 reference, the combination of the '292 reference with the '951 reference does not result in the present invention as claimed. As such, Applicant submits that claim 56 is patentable, and respectfully requests that the §103 rejection be withdrawn.

In the Office Action on page 9, paragraph 5, the Examiner rejected claims 57, 58, and 60 under 35 U.S.C. §103(a) as being unpatentable over the '292 reference. Applicant respectfully traverses this rejection. Claims 57, 58, and 60 depend from amended claim 20 and include further patentable features. The patentability of amended independent claim 20 over the '292 reference is discussed above. The Examiner alleges that the geometry of the foundation as claimed has not been disclosed as having a particular purpose, and alleges that it would have been an obvious matter of design choice to modify the geometry of the foundation of the '292 reference to be polygonal or circular, ring-shaped and hollow, and hexagonal as recited in claims 57, 58, and 60, respectively. Regardless of the geometric design selected for the '292 foundation, the '292 foundation does not result in the present invention as claimed in claims 57, 58, and 60. As such, Applicant submits that claims 57, 58, and 60 are patentable, and respectfully requests that the §103 rejection be withdrawn.

Applicant submits that all claims pending in the patent application are in condition for allowance. The fee for the new claims is included herewith. In the event there are any further fees due and owing in connection with this matter, please charge same to our Deposit Account No. 11-0223. Accordingly, both reconsideration of this application and its swift passage to issuance are earnestly solicited.

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